velop during the winter, and especially in October and December, is that this is the season for artificial heating of homes, much of which is without the necessary increase in moisture. Fatigue, mental and physical, overeating, and larger gatherings of people during the holidays, explain the December exacerbations. Some bacterium or filterable virus, not yet definitely identified, takes advantage of these circumstances and the "common cold" develops.

PHILIP H. PIERSON,
San Francisco.

Physical Therapeutics

Physical Therapeutics — Deep Heat — Diathermy—New therapeutic measures must pass through a period of experimental and clinical study before their real worth is established. Some branches of physical therapeutics are now passing through this testing period. Much clinical study has already been done, but this alone leads to empiricism. The great need now is study of physics and physiological action, because every rational physical therapeutic prescription must be based upon these fundamentals.

Particularly welcome just now is the work of Bettman and Crohn [1] on the production of deep heat by diathermy. Their work appears to show that the rise of temperature in deep tissues, produced by the passage of the high frequency current, is negligible. We have ascribed the favorable results obtained by diathermy to an active hyperemia produced by its deep heating effect. The resistance offered by the tissues to the passage of the current gives rise to heat, which in turn causes an increased blood flow through the part.

Technique of application is of first importance in all branches of physical therapeutics. Effects are altered greatly by small variations in technique. For this reason it is important when reporting experimental work to be specific about the method of procedure. Bettman and Crohn have not been as definite as might be desired in stating their experimental factors. The dosage of diathermy should be specified in terms of milliamperes, duration of application, and size of electrodes. Unless this is done the work cannot be duplicated and verified by other investigators.

If diathermy does not produce deep heat we must search further for an explanation of the good results obtained by Stewart [2] in the treatment of pneumonia, by Corbus [3] in the treatment of genitourinary diseases, and by Crile [4] in the use of diathermy through the liver, during gall-bladder surgery. Diathermy apparently produces favorable clinical results, but how does it act?

Bettman and Crohn have started a work which should be of great value to physical therapeutics, especially if it stimulates others to similar investigations.

FRED B. MOOR,
Loma Linda.

1. R. B. Bettman and Nathan M. Crohn: J. A. M. A., Vol. 88, p. 532.
2. Stewart: Physiotherapy, 1925, Paul B. Hoeber, New York.
3. Corbus and O'Connor: Diathermy in the Treatment of Genitourinary Diseases, 1925, Bruce Publishing Company, St. Paul.
4. Crile: J. A. M. A., Vol. 87, p. 309.

Cardiovascular Disorders

Coronary Thrombosis — Coronary thrombosis is a frequent cause of sudden death. Patients who survive the immediate attack may die a few weeks later from rupture of the myocardium through the area of infarction. If death does not occur within several weeks the individual's subsequent activities are greatly restricted because of a badly damaged heart muscle. The mortality in this condition is about 65 per cent. Lambert [1] states that coronary thrombosis occurs in about one-fifth of those suffering from coronary endarteritis. Many so-called attacks of "angina pectoris" are in reality due to coronary thrombosis.

In a typical attack of occlusion of one or more branches of the coronary arteries the patient suffers intense substernal pain which may radiate to the left arm and left side of the neck, or to both arms. In many instances the pain is referred to the epigastrium or to the gall bladder region, giving rise to erroneous diagnoses of acute surgical conditions of the abdomen. Nausea and vomiting occur frequently; Libman and Sacks [2] state that "dizziness at times appears to be the equivalent of nausea and vomiting, in the hyposensitive, at least."

If death does not occur immediately the patient presents the picture of shock. The face is ashen gray, and covered with cold sweat. Marked dyspnoea is present, and cyanosis is observed in many cases. The pulse is feeble, rapid, and may be very irregular. The blood pressure is usually low. Among other signs of cardiac failure crackling rales at the bases of both lungs may be detected. A slight elevation in temperature sometimes occurs within twenty-four hours following the attack. Libman and Sacks [2] call attention to an early leukocytosis as an important diagnostic feature; this is practically always present, and may occur within two hours after the infarction of the myocardium takes place. A localized pericardial friction rub is often heard over the area in which the infarct occurs if the patient lives twenty-four hours or more. The liver may be tender and slightly enlarged. When available, the electrocardiogram is of the greatest importance in confirming the diagnosis of coronary thrombosis, especially in the atypical cases. Berman and Mason, in a paper to be published, show the value of electrocardiography as a diagnostic measure in this condition; in their patients autopsy confirmed the electrocardiographic diagnosis in every instance.

The importance of the diagnosis of coronary thrombosis must not be overlooked. The attacks may simulate acute surgical conditions of the abdomen, and the patient may be subjected to an unnecessary operation if the proper diagnosis is not made. In atypical cases the diagnosis is not easy, but when available the electrocardiogram will practically always lead to the correct diagnosis.

WILLIAM H. LEAKE,
Los Angeles.

1. Lambert, Alexander: American Heart Journal, 1926, Vol. 2, p. 28.
2. Libman, E., and Sacks, B.: American Heart Journal, 1927, Vol. 2, p. 321.